WE CLAIM:

1.   A computer-implemented method for user interface testing, comprising:

      taking a first snapshot of a user interface on a target device during a first
automation execution;

      taking a second snapshot of the user interface on the target device during a
second automation execution;

      comparing pixels of the first snapshot to corresponding pixels of the
second snapshot; and

      producing a visual output of the difference between the first snapshot and
the second snapshot.

2.   The computer-implemented method of claim 1, further comprising storing
the first snapshot and the second snapshot on the target device.

3.   The computer-implemented method of claim 1, further comprising storing
a first bitmap file and a first extensible markup language file corresponding to the first
snapshot and storing a second bitmap file and a second extensible markup language file
corresponding to the second snapshot.

4.   The computer-implemented method of claim 1, further comprising
uploading the first snapshot and the second snapshot to a server using an export tool.

5.   The computer-implemented method of claim 4, wherein the export tool is
present on a host computer to which the target device and the server are in
communication.

6.   The computer-implemented method of claim 1, further comprising an
initial comparison of a property of the first snapshot to a corresponding property of the
second snapshot, wherein the initial comparison provides a pass/fail variable.

7. The computer-implemented method of claim 1, wherein the visual output of the difference between the first snapshot and the second snapshot includes a highlighted pixel for each pixel that is different between the first snapshot and the second snapshot.

8. The computer-implemented method of claim 1, further comprising providing a file that includes information regarding properties of the target device that corresponds to the first snapshot.

9. The computer-implemented method of Claim 8, wherein a snapshot key is produced from a selectable combination of the information included in the file.

10. The computer-implemented method of Claim 8, wherein a filename is produced from a selectable combination of the information included in the file, wherein the filename is associated with the first snapshot.

11. The computer-implemented method of claim 1, further comprising calculating a cyclical redundancy check value based on the first snapshot.

12. A computer-readable medium that includes computer-executable instructions for providing automatically determining differences in a user interface throughout a development cycle, comprising:

taking a first snapshot of a user interface on a target device during a first automation execution;

storing a first bitmap file and a first extensible markup language file corresponding to the first snapshot;

taking a second snapshot of the user interface on the target device during a second automation execution;

storing a second bitmap file and a second extensible markup language file corresponding to the second snapshot.

comparing a property of the first snapshot to corresponding property of the second snapshot; and

producing an output of the difference between the first snapshot and the second snapshot.

5 13. The computer-readable medium of claim 12, further comprising uploading the first bitmap file, first extensible markup language file, second bitmap file, and second extensible markup language file to a database on a server.

14. The computer-readable medium of claim 12, wherein the comparison of the property of the first snapshot to the corresponding property of the second snapshot

10 provides a pass/fail variable.

15. The computer-readable medium of claim 12, wherein the output of the difference between the first snapshot and the second snapshot comprises a visual output with a highlighted pixel for each pixel that is different between the first snapshot and the second snapshot.

15 16. The computer-readable medium of Claim 12, wherein a snapshot key is produced from a selectable combination of information included in the extensible markup language file.

17. The computer-readable medium of Claim 12, wherein a filename associated with the first snapshot is produced from a selectable combination of

20 information included in the extensible markup language file.

18. The computer-readable medium of claim 12, wherein the property of the first snapshot is a first cyclical redundancy check value based on the first snapshot and the corresponding property of the second snapshot is a cyclical redundancy check value based on the second snapshot.

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19. A system for providing automatically determining differences in a user interface throughout a development cycle, comprising:

a target user interface device that includes a first application that is

5 configured to:

take a first snapshot of a user interface on a target device during a first automation execution,

take a second snapshot of the user interface on the target device during a second automation execution,

10 store the first snapshot and the second snapshot;

a host device that includes a second application that is configured to upload the first snapshot and the second snapshot; and

a server that includes a third application that is configured to:

receive the first snapshot and the second snapshot,

15 compare a property of the first snapshot to corresponding property of the second snapshot, and

produce an output of the difference between the first snapshot and the second snapshot.

20. The system of claim 19, wherein the first application is further configured

20 to store a first bitmap file and a first extensible markup language file corresponding to the first snapshot and storing a second bitmap file and a second extensible markup language file corresponding to the second snapshot.

21. The system of claim 19, wherein the comparison of the property of the first snapshot to the corresponding property of the second snapshot provides a pass/fail

25 variable.

22. The system of claim 19, wherein the output of the difference between the first snapshot and the second snapshot comprises a visual output with a highlighted pixel for each pixel that is different between the first snapshot and the second snapshot.

23. The system of claim 19, wherein the third application is further configured to provide a snapshot key from a selectable combination of information included in a file related to the first snapshot.

24. The system of claim 19, wherein a filename associated with the first snapshot is produced from a selectable combination of information included in a file related to the first snapshot.

25. The system of claim 19, wherein the property of the first snapshot is a first cyclical redundancy check value based on the first snapshot and the corresponding property of the second snapshot is a cyclical redundancy check value based on the second snapshot.